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PATENT
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RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE -
EXAMINING GROUP 2815

Attorney Docket No.: 020487-000300US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Yueh Yale Ma et al.

Application No.: 09/467,141

Filed: December 10, 1999

For: DUAL-BIT DOUBLE-
POLYSILICON SOURCE-SIDE
INJECTION FLASH EEPROM CELL

Examiner: E. Lee

RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE

EXAMINING GROUP 2815

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Assistant Commissioner for Patents
Washington, D.C. 20231

October 18, 2002

Sir:

In response to the Final Office Action mailed June 18, 2002, for which a request for a one-month extension of time to reply is enclosed, Applicants provide the following remarks:

REMARKS

Claims 1-18, 21-29, and 37-49 are pending. Claims 38-49 have been withdrawn from consideration by the Examiner as being directed to an invention that is independent or distinct from the invention originally claimed. The remaining claims have been rejected as set forth in the following section.

35 USC 102(b) and 103(a) rejections:

Claims 1-4, 7-9, and 25-26 are rejected under 35 USC 102(b) as being anticipated by Tigelaar USPN 5,273,926. Claims 5, 6, 21-24, 27-29, and 37 are rejected

under 35 USC 103(a) as being unpatentable over Tigelaar '926 in view of Guterman '691. Claims 10-18 are rejected under 35 USC 103(a) as being unpatentable over Tigelaar '926. These rejections are respectfully traversed.

Claim 1 distinguishes over Tigelaar at least by reciting "first and second floating gates over the channel region".

The Office Action indicates that the first and second floating gates recited in Applicants' claim 1 are shown by floating gate elements 60a, 60b in Fig. 3e of Tigelaar. This is traversed because elements 60a and 60b form part of one floating gate 60, and thus do not constitute "first and second floating gates" as recited in Applicants' claim 1.

Tigelaar in column 5, lines 11-16, in reference to Fig. 5c, states:

The floating gates 58-62 are shown in phantom, and preferably take the form of hollowed-out rectangles.
Portions 100 ... connect the floating gate portions 60a and 60b to be a single conductive unit.

Underline is added. That floating gate portions 60a and 60b form part of a single floating gate is more clearly shown in Fig. 3d. Here, a rectangular portion 82 of floating gate 60 is cut out so that a rectangular opening is created in floating gate 60. Thus, portions 60a and 60b form parts of a single floating gate, not "first and second floating gates" as recited in Applicants' claim 1.

The "first and second floating gates" recited in Applicants' claim 1 has significant functional implications. Two floating gates in one cell enables storing two bits of information in one cell (hence the invention title "dual-bit ... cell"). In contrast, Tigelaar's cell can store only one bit of information since it contains only one floating gate. Support for this assertion can be found in column 5, lines 36-38 wherein Tigelaar states "[t]he cell of the invention is read, written to and erased in a fashion similar to conventional EEPROM cells such as the cell shown in FIG. 2". The cell in Fig. 2 has only one floating gate and stores one bit of information.

Thus, claim 1 and its dependent claims 2-18 and 21-27 distinguish over Tigelaar at least for the above reason.

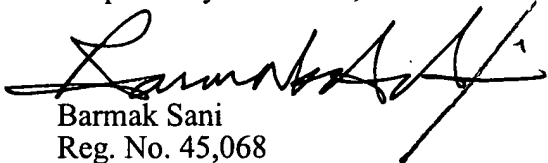
Claims depending from claim 1 include features which further distinguish them over Tigelaar. For example, claim 9 recites "each of the first and second floating gates stores one bit of information". As stated above, Tigelaar's cell has only one floating gate and thus is not capable of storing two bits of information.

Claim 28 includes similar limitations to those discussed above in connection with claim 1, and thus claim 28 and its dependent claims 29 and 37 distinguish over Tigelaar for at least the reasons stated above.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged. If the Examiner believes a telephone conference would aid in the prosecution of this case in any way, please call the undersigned at 650-326-2400.

Respectfully submitted,


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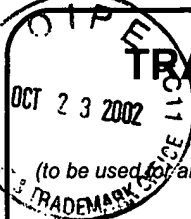
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Application Number	09/467,141
Filing Date	December 10, 1999
First Named Inventor	Ma, Yueh Yale
Group Art Unit	2815
Examiner Name	E. Lee
Attorney Docket Number	020487-000300US

Total Number of Pages in This Submission

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ENCLOSURES (check all that apply)

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Remarks

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm and Individual name	Townsend and Townsend and Crew LLP Barmak Sani	Reg. No. 45,068
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